Software Engineering

Design By Contract

3 Ba INF 2018-2019

Stephen Pauwels

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1 Practical

- Deadline: **November 18, 23u55**

2 Context

The basis of Design by Contract is formed by verifiable contracts embedded in the source code. These contracts enforce developers to comply with the contracts in an explicit and easy to use way. Most languages were created before the introduction of Design by Contract. This is why these languages do not have build-in support for contracts. However, most languages did incorporate elements from Design by Contract (like assert in Java). In this project we will use a library developed within Ansymo. The library, Adbc is built for AspectJ (an extension of Java), since it is an extension we can also use it for Java itself.

3 Assignment

1. Download and add the Adbc library from blackboard into your Eclipse Project.
2. Read the Readme about Adbc that can be found on blackboard and familiarize yourself with the tool and its syntax.
3. The clients have given us a more detailed specification about some of the key components. Use these specifications to create contracts and use Adbc to include these contracts in the source code, also look at other classes in the core package and add appropriate contracts. If needed add functions with the requested functionality.
4. Write a clear report on what contracts you added and why they are important and relevant.

4 Detailed Specifications

4.1 Cart

- A positive amount of items may be added to an cart.
- Items has to be present in an order, before you can remove it from the cart.
- The total cost of an cart can be returned.
- The total cost should be returned as a string in the correct form for valuta.

4.2 Item

- The price of an item must be non-zero positive.
- Two items cannot have the exact same name, description and price (in the catalog).
- The system (catalog) should be able to filter out the correct categories.